

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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| Applicant's or agent's file reference 50425/215 | | Date of mailing (day/month/year) 28 FEB 2007 |
| International application No. PCT/US05/10521 | | International filing date (day/month/year) 29 March 2005 (29.03.2005) |
| International Patent Classification (IPC) or both national classification and IPC IPC: A61K 48/00(2006.01);C07H 21/04(2006.01);A61K 39/395(2006.01) USPC: 424/130.1;514/44;536/24.5 | | Priority date (day/month/year) 29 March 2004 (29.03.2004) |
| Applicant NORTH SHORE- LONG ISLAND RESEARCH INSTITUTE | | |

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

| | | |
|--|--|---|
| Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201 | Date of completion of this opinion 17 January 2007 (17.01.2007) | Authorized officer Amy H. Bowman <i>Janice Ford</i> Telephone No. (571)272-1600 |
|--|--|---|

Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE
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International application No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in electronic form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
See the lack of unity section of the International Search Report (Form PCT/ISA/210)

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-3, 5, 9 and 10

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Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------------------------------|-----|
| Novelty (N) | Claims <u>NONE</u> | YES |
| | Claims <u>1-3, 5, 9 and 10</u> | NO |
| Inventive step (IS) | Claims <u>NONE</u> | YES |
| | Claims <u>1-3, 5, 9 and 10</u> | NO |
| Industrial applicability (IA) | Claims <u>1-3, 5, 9 and 10</u> | YES |
| | Claims <u>NONE</u> | NO |

2. Citations and explanations:

Claims 1-3, 5, 9 and 10 lack novelty under PCT Article 33(2) as being anticipated by Gaeta et al. (US 2003/0195194 A1).

Gaeta et al. teach method of treating a mammal having a pathological condition associated with MIF activity and teach introduction of an anti-MIF antibody. Gaeta et al. teach a method of inhibiting MIF in mice and teach that anti-MIF antibodies are associated with reduction in circulating serum TNF-alpha levels. Applicant has not provided a structure that would define what mammals are at a risk for diabetes and therefore the treatment of a mammal with an anti-MIF agent, more specifically an anti-MIF antibody for the treatment of a pathological condition associated with MIF anticipates the instant invention.

Claims 1-3, 5, 9, and 10 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.